

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1-13. (Canceled)

14. (New) A data storage apparatus coupled to a computer, comprising:

a control unit coupled to the computer;

a memory coupled to the control unit;

a storage device being a non-removable storage medium and coupled to the control unit; and

a first storage volume and a second storage volume configured on the storage device,

wherein the control unit provides a virtual disk drive unit for the computer so that the control unit makes the computer recognize that the virtual disk drive unit handles a removable storage medium,

wherein, in response to receiving a first instruction for loading the removable storage medium to the virtual disk drive unit, the control unit modifies relationship information to make a relation between the first storage volume and the virtual disk drive unit, so that the control unit makes the computer recognize that the first storage volume is loaded to the virtual disk drive unit as the removable storage medium.

15. (New) A data storage apparatus according to claim 14,

wherein, based on receiving a second instruction for ejecting the removable storage medium from the virtual disk drive unit from the computer, the control unit modifies the relationship information to delete the relation between the first storage volume and the virtual disk drive unit, so that the control unit makes the computer recognize that the first storage volume is ejected from the virtual disk drive unit as the removable storage medium, and

the control unit notifies the computer of completion of ejecting the first storage volume from the virtual disk drive unit.

16. (New) A data storage apparatus according to claim 14,

wherein the first instruction is sent from a management computer which is coupled to the data storage apparatus, and

wherein the control unit notifies the management computer of loading the first storage volume to the virtual disk drive unit.

17. (New) A data storage apparatus according to claim 14,

wherein the first instruction is sent from the computer.

18. (New) A data storage apparatus according to claim 14,

wherein, in response to receiving a verification command for confirming a type of the virtual disk drive unit in the data storage apparatus from the computer, the control unit sends a reply indicating that the virtual disk drive unit handles the removable storage medium even though the data storage apparatus has the storage device which is the non-removable storage medium.

19. (New) A data storage apparatus according to claim 14,

wherein, in response to receiving a verification command for verifying a type of the virtual disk drive unit of the data storage apparatus from the computer, the control unit sends a reply indicating that the virtual disk drive unit is a magnetic disk drive unit which handles the removable storage medium even though the data storage apparatus has the storage device which is non-removable storage medium.

20. (New) A data storage apparatus according to claim 14,

wherein the second storage volume is set as a replica volume of the first storage volume, and

wherein the control unit stores data into the first storage volume and the second storage volume if the control unit receives a write command for writing data to the removable storage medium from the computer.

21. A data storage apparatus according to claim 19,

wherein, in response to receiving a third instruction for stopping a replication from the computer, the control unit stops storing the data into the second storage volume.

22. A data storage apparatus according to claim 15,

wherein the second storage volume is set as a replica volume of the first storage volume,

wherein the control unit stores data into the first storage volume and the second storage volume if the control unit receives a write command for writing data to the removable storage medium from the computer, and

wherein, based on receiving the second instruction from the computer, the control unit stops storing the data into the second storage volume.

23. (New) A data storage system comprising:

a computer; and

a data storage apparatus, coupled to the computer, which includes a plurality of storage volumes which are configured by a non-removable storage medium and provides a virtual disk drive unit for the computer, the data storage apparatus making the computer recognize that the virtual disk drive unit handles removable storage mediums,

wherein the computer sends a first instruction to the data storage apparatus to eject a first removable storage medium of the removable storage mediums from the virtual disk drive unit,

in response to receiving the first instruction, the data storage apparatus notifies the computer of completion of ejecting the first removable storage medium from the virtual disk drive unit.

24. (New) A data storage system according to claim 23,

wherein the data storage apparatus modifies relationship information to delete a relation between the virtual drive unit and a first storage volume of the plurality of storage volumes so that the data storage apparatus makes the computer recognize that the first storage volume is loaded to the virtual disk drive unit as the first removable storage medium in response to receiving the first instruction.

25. (New) A data storage system according to claim 23 further comprising a management computer coupled to the data storage apparatus,

wherein the management computer sends a second instruction to the data storage apparatus to load the first removable storage medium to the virtual disk drive unit,

in response to receiving the second instruction from the management computer, the data storage apparatus modifies the relationship information to create

the relation between the virtual disk drive unit and the first storage volume so that the data storage apparatus makes the computer recognize that the first storage volume is loaded to the virtual disk drive unit as the first removable storage medium.

26. (New) A data storage system according to claim 23,

wherein the computer sends a second instruction to the data storage apparatus to load the first removable storage medium to the virtual disk drive unit,

in response to receiving the second instruction from the computer, the data storage apparatus modifies the relationship information to create the relation between the virtual disk drive unit and the first storage volume so that the data storage apparatus makes the computer recognize that the first storage volume is loaded to the virtual disk drive unit as the first removable storage medium.

27. (New) A data storage system according to claim 23,

wherein a second storage volume of the plurality of storage volumes is set as a replica storage volume of the first storage volume,

wherein the computer sends a write command for storing data into the first removable storage medium to the data storage apparatus, and

in response to receiving the write command, the data storage apparatus stores the data into the first storage volume and the second storage volume.

28. (New) A data storage system according to claim 27,

wherein the computer sends a third instruction to the data storage apparatus for stopping data replication, and

in response to receiving the third instruction, the data storage apparatus stops storing the data into the second storage volume.

29. (New) A data storage system according to claim 23,

wherein a second storage volume of the plurality of storage volumes is set as a replica storage volume of the first storage volume,

wherein the computer sends a write command for storing data into the first removable storage medium to the data storage apparatus,

in response to receiving the write command, the data storage apparatus stores the data into the first storage volume and the second storage volume, and

in response to receiving the first instruction, the data storage apparatus stops storing the data into the second storage volume and notifies the computer of completion of re-loading the first removable storage to the virtual disk drive unit.

30. (New) A data storage system according to claim 23,

wherein the computer sends a verification command for verifying a type of the virtual disk drive unit in the data storage apparatus to the data storage apparatus, and

in response to receiving the verification command, the data storage apparatus sends a reply indicating that the virtual disk drive unit handles the removable storage medium even though the data storage apparatus has the non-removable storage medium.

31. (New) A data storage apparatus according to claim 23,

wherein the computer sends a verification command for verifying a type of the virtual disk drive unit in the data storage apparatus to the data storage apparatus, and

in response to receiving the verification command, the data storage apparatus sends a reply indicating that the virtual disk drive unit is a magnetic disk drive which has the removable storage medium even though the data storage apparatus has a hard disk drive which includes the non-removable storage medium.

32. (New) A data storage system according to claim 23,

wherein the computer recognizes that the data storage apparatus includes the non-removable storage medium.